Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Rural Digital Opportunity Fund	)	WC Docket No. 19-126
	)	
Connect America Fund	)	WC Docket No. 10-90

COMMENTS OF WINDSTREAM SERVICES, LLC

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COMMENTS OF WINDSTREAM

Windstream Services, LLC ("Windstream") submits these comments in response to the Commission's Notice of Proposed Rulemaking regarding the Rural Digital Opportunity Fund ("RDOF").[1]

I. INTRODUCTION AND EXECUTIVE SUMMARY

Windstream supports RDOF as an important next step in the Commission's ongoing efforts to close the digital divide and looks forward to contributing its own efforts toward this critical goal. In these comments, Windstream offers thoughts on how to structure the RDOF auction to maximize the benefits for rural consumers while minimizing the burden on contributors and their customers.

First and foremost, the Commission should hold a single auction to assign RDOF support *after* it has corrected the known, substantial problems with current broadband and location data. Improved data will produce far better results and coverage for rural Americans, connecting more homes with limited, available Universal Service Fund ("USF" or "Fund") support. Already, the pilot stage of USTelecom's broadband mapping initiative has quantified the number of locations

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[1] *Rural Digital Opportunity Fund; Connect America Fund*, Notice of Proposed Rulemaking, FCC No. 19-77, WC Docket Nos. 19-26 & 10-90 (rel. Aug. 2, 2019) ("*Notice*" or "*NPRM*").

within the pilot area wrongly reported as served (where a location within a "served" census block is actually unserved—an issue the Commission proposes to address in the second phase of RDOF, which may be many years away) and the prevalence of incorrect location counts within census blocks. The latter issue raises serious questions about the viability of the Commission's current Phase I proposal: the location counts in the pilot area differed from the Commission's location counts almost half of the time.

It is unrealistic to expect that bidders in an auction of 3.9 million locations can conduct and complete the extensive due diligence required to determine how many locations are *actually* in a census block in the limited time available. In the CAF II auction, if the Commission's location count was high, a winning bidder had to give money back on a pro rata basis, upending their expectations and putting the viability of their deployments at risk. On the other hand, if the Commission's location count was low, potential broadband consumers may have been "left out in the cold" without service. Given the amount of money at stake and the length of the proposed funding term, the Commission must capitalize on this unique opportunity to run an efficient auction that benefits as many rural consumers as possible. Conducting a single auction after the Commission has collected reliable service information and determined accurate location counts would result in a more efficient auction that would undoubtedly better serve rural Americans for many years to come.

Before this *Notice* was released, USTelecom proposed that the Commission begin by auctioning wholly-unserved census block *groups* rather than individual census blocks (i.e., the entire census block group is unserved).[2] This proposal was designed to minimize the negative

[2] Letter from Mike Saperstein, Vice President, Policy & Advocacy, USTelecom, to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket No. 19-126 (filed June 24, 2019) ("USTelecom

ramifications of relying on current, inaccurate location counts. It would also maximize participation, as bidders would seek to exploit network efficiencies in areas of contiguous unserved blocks. Greater participation would lead to lower bids and more efficient use of universal service dollars. Moreover, the fact that these census block groups consist entirely of contiguous unserved census blocks suggests that these areas have significantly higher-than-estimated costs and/or other buildout barriers. USTelecom's proposal remains a viable alternative auction format that would minimize the effect of flawed data.

However, if the Commission chooses to move forward with its current two-phase proposal (auctioning all eligible unserved census blocks in the first phase), it should adopt targeted changes to its proposal to improve the outcome of RDOF for rural consumers. Critically, the Commission must take steps to ensure that our 5G future is strengthened and not weakened by RDOF. This will require that the Commission take crucial steps to incentivize high-speed terrestrial infrastructure that will have a lasting, positive impact on rural America.

- First, the Commission should increase the high-latency weight to at least 45 points to encourage fiber deployment (which will be critical for 5G) and provide rural consumers with meaningful access to applications such as health monitoring and security surveillance.

6/24/19 Ex Parte"). The Census Bureau establishes census block groups using specific criteria that make them also suitable for planning network deployment. Census block groups must generally reflect "a reasonably compact and contiguous land area." Their boundaries follow visible significant physical features, such as roads, rivers, and railroad tracks. Department of Commerce, Bureau of the Census, Block Groups for the 2020 Census—Final Criteria, 83 Fed. Reg. 56,293, 56,295 (Nov. 13, 2018). Their compact design allows potential bidders to bid efficiently by sharing middle mile and other core network facilities across the population, and the preferred natural boundaries are also the kinds of boundaries that can add costs for providers to cross.

- Second, the Commission should also take steps to further incentivize bidding at higher-speed tiers by reducing weight assigned to the above-baseline tier by a minimum of ten points: a forward-looking policy that would encourage bids at that tier to better bridge the gap between rural and urban broadband speeds.
- Third, the Commission should not require a letter of credit as a condition for bidding. This is an overly burdensome requirement that can render deployment in RDOF areas uneconomic and drain significant dollars from the Fund that would otherwise go towards investment in broadband services. Instead, Windstream proposes more efficient ways to ensure that bidders follow through with their deployments: (a) require an upfront escrow payment, (b) limit the total amount that a provider can bid to the amount of its annual revenues, and (c) require providers to be prepared to offer voice service throughout the winning area upon assuming ETC obligations.
- Fourth, given the current inaccurate broadband deployment data, the Commission will encourage greater participation in the auction and more effective auction results by forgoing any reduction in funding as a result of overcounts, providing bidders with greater certainty to calculate costs and deployment viability.
- Fifth, the Commission should increase the allowance for "missed" locations to ten percent (10%) to account for the unique, unforeseen deployment obstacles in rural areas. This greater flexibility in deployment would encourage more bids, particularly in the most remote areas that providers have the least amount of knowledge about.
- Finally, the Commission should establish an appropriate, fair, and equitable transition framework that accounts for reductions in CAF Phase II model support and ensures that rural consumers retain access to critical voice and broadband services.

These targeted changes would minimize burdens on the Fund while delivering broadband to more rural consumers and guaranteeing that consumers who benefited from CAF II continue to benefit from RDOF.

II. BACKGROUND

Connect America has made great strides in bringing broadband to unserved and underserved rural Americans. Through its own participation, Windstream has deployed broadband to over 370,000 locations and is working to fulfill its Connect America Fund ("CAF") Phase II commitments to bring the total to over 400,000 locations in high-cost areas. In 2018, Windstream exceeded its deployment milestones in all 17 of the states where it is receiving CAF support. Furthermore, Windstream has surpassed the minimum speed requirement for over 30,000 locations, including deploying 1 Gbps service to hundreds of locations.[3] Windstream's CAF-supported deployments have made real differences to the lives of rural Americans within our footprint. For example, Windstream's deployment of 100 Mbps fixed wireless in Osceola, Iowa allowed an employee to move away from her employer and settle in a rural area while continuing to work remotely—partly because of CAF, Windstream has deployed fixed wireless to 26 markets in Iowa and is working on more.[4] CAF is making a difference.

At the same time, CAF must improve and there are opportunities for such improvement. Through its broadband mapping pilot in Virginia and Missouri, USTelecom has revealed two categories of significant flaws in current Commission broadband data.

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[3] Windstream's progress to date is reflected in its HUBB filings and the Connect America Fund Broadband Map, https://data.usac.org/publicreports/caf-map/.

[4] *Windstream Expands Broadband Availability Across Iowa With Fixed Wireless*, WINDSTREAM (July 2, 2019), https://investor.windstream.com/news/news-details/2019/Windstream-Expands-Broadband-Availability-Across-Iowa-With-Fixed-Wireless/default.aspx.

First, as was widely known but previously not quantified, the Form 477 data overstate the number of locations that are "served." The pilot found that 38 percent of rural locations—more than a third—reported as served actually are unserved.[5] Second, for 48 percent of census blocks, the number of housing units per the 2010 Census is inaccurate, in some cases by significant amounts from 32 percent to 55 percent.[6]

Because the data currently available to the Commission badly misstate both the number of locations in an area and whether they are already served at modern broadband speeds, CAF has not always funded the right areas at the right levels. When areas receive support to serve more locations than need service, funds are not available to serve other locations. And when areas do not receive enough support to serve all the locations that still need broadband, some will go without until the next CAF program for their area. Furthermore, if a bidder must return money to the Fund on a pro rata basis because there are fewer actual locations in an area than are specified by the Commission, this throws off the economics of terrestrial broadband deployment for the entire area. Networks are not built on a pro rata basis—the most expensive components of the network (transport and backhaul) are built first, usually followed by smaller incremental costs to build to each location.

III. THE COMMISSION SHOULD HOLD A SINGLE AUCTION BASED ON IMPROVED DATA

Windstream appreciates the Commission's prioritization of RDOF and its desire to move forward expeditiously. Improved broadband mapping and location data, however, are an

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[5] CostQuest Associates, *Broadband Mapping Initiative Proof of Concept Summary of Findings* at 3, 7 ("*Broadband Mapping Proof of Concept*"), attached to Letter from Jonathan Spalter, President & CEO, USTelecom, to Marlene H. Dortch, Secretary, FCC, at 2, WC Docket Nos. 19-195, 11-10, 10-90 & 19-126 (filed Aug. 20, 2019).

[6] *Id.* at 4, 7, 20-21.

essential foundation for achieving effective and efficient auction results. At present, Windstream and others[7] have legitimate concerns about the degree of misinformation in the Commission's current data. To balance its goals, the Commission should hold a single RDOF auction after correcting current broadband mapping and location counts. If the Commission proceeds with a two-phase auction, however, USTelecom's proposal to auction wholly unserved census block groups in the first phase would minimize the harms flowing from the current inaccurate data.[8]

A. Holding a Single Auction After Correcting the Broadband Service Maps and Location Information Will Produce More Rural Broadband for Less Support.

Holding a single RDOF auction after the Commission has improved coverage and location data will produce far better results—more rural broadband for less USF dollars. As the Commission has recognized, correcting its current broadband deployment data is a necessary step toward understanding where unserved locations are and where to more effectively target

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[7] *Hearing on "Legislating to Connect America: Improving the Nation's Broadband Maps" Before the Subcomm. on Commc'n and Tech. of the H. Comm. on Energy & Commerce*, 116th Cong. (2019) (testimony of Shirley Bloomfield, CEO of NTCA – the Rural Broadband Association, at 2) (stating that many stakeholders have "found the results of [the FCC's] mapping efforts frustratingly inconsistent and unreliable. In fact, we find it is not unusual for "conditions on the ground" to look very different from those depicted on national maps."), https://energycommerce.house.gov/committee-activity/hearings/hearing-on-legislating-to-connect-america-improving-the-nations; *id.* (testimony of Jonathan Spalter, President & CEO of USTelecom Association, at 2) (explaining that the FCC's data are inaccurate and create acute problems in rural areas); *id.* (testimony of Grant Spellmeyer, Vice President, Federal Affairs & Public Policy of U.S. Cellular, at 2, 4) (describing the Commission's mapping process as "historically flawed" and stating that it should have been fixed "years ago"); *id.* (testimony of James Stegeman, President & CEO of CostQuest Associates, at 6) (explaining that the inaccurate maps have caused up to six million unserved households).

[8] *See* USTelecom 6/24/19 Ex Parte at 2.

USF funds.[9] With efforts already underway to determine and correct inaccuracies, waiting a short time to hold an auction based on improved data would reap significant benefits.

Improved data will give all bidders confidence that they know precisely what they are bidding for and allow them to better analyze their costs before they bid. As proposed, providers will enter the Phase I auction knowing that the number of unserved locations within a census block is likely wrong by a significant margin. Both undercounts and overcounts in the data lead to insufficient bid amounts and lost opportunities to deploy service where it is needed. If the count of unserved locations is too low, the census block may draw fewer bids because bidders believe that they will have fewer potential customers (and a lower teledensity) to justify their investment than are actually available. This could result in bidders withdrawing from some areas entirely, leaving even viable deployment areas without service until future funding opportunities. Worryingly, even bidders that choose to stay in and win may reach the stated number of locations but not deploy to every unserved location within the block, again leaving unserved customers stranded without service. Alternatively, if the location counts are too high, and bidders must return funds to the Commission because reality proved that there were fewer locations in the eligible area than the Commission's data reflected, providers may not be left with enough funds to finance the core and most expensive parts of the network expansion to the area, jeopardizing the entire project.

The wait for improved data need not be long, and while those data are gathered and processed, the Commission can proceed with other preparations for the RDOF auction. It is

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[9] *Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, Report and Order and Second Further Notice of Proposed Rulemaking, FCC No. 19-79, WC Docket Nos. 19-195 & 11-10 ¶ 10 (rel. Aug. 6, 2019).

reasonable to assume that, with the right priorities, the Commission and USAC could have new deployment information collected by the end of 2020. USTelecom states that improved location data could be available within 12 to 15 months.[10] Even with some time for scrubbing the data and making it available to the public, this will not necessarily cause the RDOF auction to be delayed. In the CAF Phase II reverse auction, just over a year transpired between when the Commission adopted its last rules to the day that short form applications were due.[11] Even if the Commission resolves the issues in the *Notice* and issues a Report and Order relatively quickly—e.g., December 2019 or January 2020—it will need several months afterwards to obtain Paperwork Reduction Act approval for new information collections, seek comment on and adopt auction procedures, and prepare its auction systems to conduct the auction in accordance with the final rules and procedures. Even if there is an additional six months before the final data are ready, Windstream submits that a six-month wait is a small price for delivering broadband to more rural Americans and using contributors' funds as efficiently as possible. The benefits of a well-staged auction based on good data far outweigh the costs of a limited delay, especially given that networks will need to be constructed or upgraded before the new services can be delivered.

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[10] *Broadband Mapping Proof of Concept* at 5.

[11] The Commission adopted the Report and Order and Order on reconsideration on March 2, 2017. *Connect America Fund et al.*, Report and Order and Order on Reconsideration, 32 FCC Rcd. 1624 (2017). (It subsequently adopted another order on reconsideration. *Connect America Fund et al.*, Order on Reconsideration, 33 FCC Rcd. 1380 (2018).) Form 183, the "short form" application, was due on March 30, 2018. *Connect America Fund Phase II Auction Scheduled For July 24, 2018; Notice And Filing Requirements And Other Procedures For Auction 903*, Public Notice, 33 FCC Rcd. 1428, 1433 ¶ 10 (2018) ("*Auction 903 Procedures PN*").

B. USTelecom's Proposal to Auction Unserved Census Block Groups is a Viable Alternative that Would Minimize Costs, Maximize Participation, and Deliver Broadband to the Most Underserved Areas.

If the Commission decides not to conduct a one-phase auction, it should consider USTelecom's proposal to auction wholly unserved census block groups, rather than census blocks, in the first phase.[12] First, auctioning wholly unserved census block groups would increase efficiency by reducing the amount of the $16 billion RDOF budget used in the first phase, where the Commission and bidders would still be relying on current, flawed broadband mapping and location data. Second, auctioning "islands" of disconnected unserved census blocks, rather than the larger census block groups, will result in higher construction costs, which translate to higher bids and an inefficient use of USF dollars. Bringing service to unserved areas often requires an investment in middle mile or core infrastructure, such as backhaul, for bringing Internet traffic back to the nearest point of aggregation. Fewer bidders will see an economic opportunity to build out only to unserved census blocks, compared to all unserved locations within a census block group. Less participation leads to higher bids or no winning bids at all. Third, the Commission's current proposal would require auctioning the same census block groups in Phase II, resulting in inefficiencies as multiple providers receive support to build out to adjacent areas.

Moreover, given that unserved census block groups are likely more remote and are larger areas of contiguous unserved census blocks, it follows that they are particularly difficult to deploy to or are otherwise poor investment opportunities. Broadband deployment to these areas may therefore be particularly reliant on USF support. Auctioning unserved census block groups

[12] *See* USTelecom 6/24/19 Ex Parte at 2 ("[T]he Commission must await the implementation of a location-based broadband reporting program before proceeding with a major $20 Billion program.").

first will ensure that these areas receive a "fair shake" and are not overlooked in a larger auction of all unserved census blocks as bidders prioritize lower-cost options. Adopting this approach would target USF dollars with greater precision toward the areas with the greatest need for support.[13] In the second phase, once the Commission's broadband maps have been updated, the bulk of RDOF funds could be used to serve all remaining unserved locations in both served and unserved census blocks. This would ensure that RDOF as a whole is efficient and effective.

IV. IF THE COMMISSION PROCEEDS WITH A PHASE I AUCTION OF UNSERVED CENSUS BLOCKS, SMALL CHANGES WILL PRODUCE BETTER RESULTS FOR RURAL CONSUMERS AND PROMOTE 5G DEPLOYMENT

Should the Commission choose to move forward with its current two-phase proposal, Windstream suggests several marginal improvements to benefit rural consumers with higher speeds, lower latency, and deployment to more locations.

A. The Commission Should Adjust the High-Latency Weight To Encourage Fiber Deployment.

The RDOF presents the single best opportunity, most likely for the next ten years, to bring robust broadband-capable networks to unserved and underserved locations in rural America. The Commission should use this opportunity to enable rural Americans to benefit from all the same applications as their urban counterparts, while also setting the stage for 5G deployment in rural areas. High-latency services will not achieve these objectives.

As the Commission has recognized on many occasions, some broadband uses require low latency to function as intended. In addition to voice applications, the quality of interactive distance learning suffers at high latency.[14] Some types of health monitoring require real-time

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[13] *Id.*

[14] *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such*

connectivity.[15] Video surveillance and industrial control systems require a "genuinely 'live' connection."[16] Video chat and video conferencing require low latency to avoid affecting the "perceived quality" of these "interactive services."[17] The Commission has proposed to assign a weight of 40 points to any bid that would deploy service with latency above 100 ms.[18] The weight should be increased to 45 points at minimum.

The Commission should give preference to low-latency bids at a higher level than it has proposed. First, the areas that will become served through the RDOF will likely remain served by the winning bidder for at least 10 years. The Commission should maximize the likelihood that these rural locations receive low-latency broadband comparable to that available to their urban counterparts for the next ten years. Consumers of low-latency broadband do not have to experience any delay in real-time interactions or forgo certain applications altogether, such as life-critical remote health monitoring. Neither should customers who become served through the

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Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, Eleventh Broadband Progress Notice of Inquiry, 30 FCC Rcd. 8823, 8835 ¶ 32 n.69 (2015).

15 Adam Byrne, *A Real-Time Connection Is Key to IoT Development*, ITPROPORTAL (May 22, 2018) ("[M]edical staff now rely on IoT to collect data from patients, keep doctors connected to co-workers and patient data, and keep equipment connected to the engineer. The tracking of patient health requires an extremely low latency, where data is sent every second to doctors and nurses to ensure they do not miss anything life threatening.").

16 *Id.* ("Business-critical devices . . . such as video surveillance cameras, industrial control systems, or consumer transaction terminals have very different connectivity requirements. By definition, these devices demand low latency connectivity to support real-time monitoring and management . . . . It is vital they have a genuinely 'live' connection to ensure the data they share is up to date and accurate at all times and to enable people to remote into and or monitor and control them.").

17 FCC, Office of Eng'g and Tech., Seventh Measuring Broadband America Fixed Broadband Report, at 8, *appended to Communications Marketplace Report et al.*, Report, 33 FCC Rcd. 12,558 (2018).

18 *Notice* ¶ 25.

RDOF; indeed, rural customers may have a greater need for video conferencing and remote health monitoring due to their distance from a major hospital, university, or employer.

In addition, as the *Notice* recognizes, 5G deployment requires fiber or other high-speed, high-capacity terrestrial fixed networks, not the non-terrestrial networks typically associated with higher latency.[19] Low-latency services, even at the baseline tier, will usually require extending fiber further into the rural area. For 25/3 Mbps service, in Windstream's experience, a provider can offer broadband using VDSL2 over a bonded pair but the DSLAM must be no more than 4,000 feet from the customer's location. Service at 100/20 Mbps using VDSL2 (with vectoring) over a bonded pair requires that the DSLAM is no more than 3000 feet from the customer. The transmission facility from the DSLAM back to the next point of aggregation is typically fiber, meaning that service even at 25/3 Mbps will likely bring fiber to within three-quarters of a mile of any customer's location. Having this fiber available is an essential step towards 5G availability. Increasing the weight assigned to high-latency bids will further promote fiber deployment, which "may serve as a backbone for 5G deployments."[20]

B. Reducing the Weight Assigned to the Above-Baseline Tier Will Promote Deployment of Higher-Speed Services and Fiber.

One of the purposes of the RDOF is to ensure that "[c]onsumers in all regions of the Nation, including . . . those in rural, insular, and high cost areas, should have access to telecommunications and information services . . . that are reasonably comparable to those

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[19] *Id.*

[20] *Id.*; *see also* Statement of Commissioner Brendan Carr, *Rural Digital Opportunity Fund et al.*, FCC 19-77 (rel. Aug. 2, 2019) (noting that the proposal "gives greater weight to offerings that can serve as the backbone for 5G services, which can help support a broad array of next-gen builds").

services provided in urban areas."[21] Achieving this goal means bringing broadband speeds to rural America that align as closely as possible with the speeds available in urban areas. This requires encouraging bids at the above-baseline tier of 100/20 Mbps, rather than the baseline tier of 25/3 Mbps.

As of December 2017, there are more fixed broadband connections at 100 Mbps download speed or higher (40.6 million) than at speeds between 25 Mbps and 100 Mbps (34.1 million).[22] The number of fixed broadband connections at 100 Mbps or higher more than quadrupled from 2014 to 2017.[23] At that rate, by December 2020 there will be almost twice as many connections at 100 Mbps than at 25 Mbps:[24]

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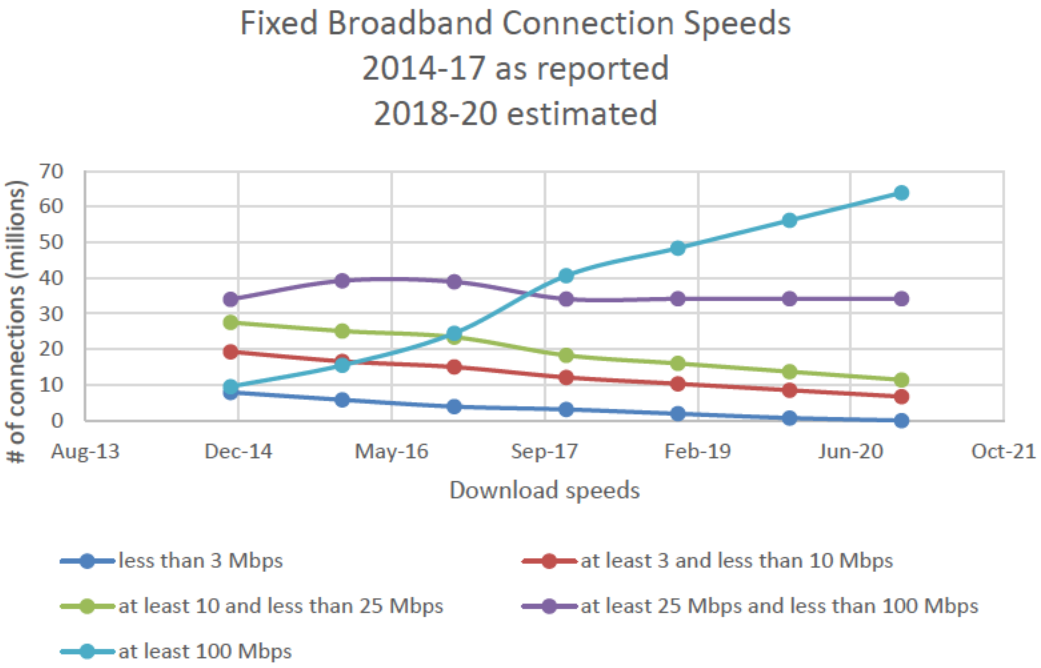
[21] 47 U.S.C. § 254(b)(3).

[22] FCC, Office of Econ. and Analytics, Indus. Analysis Div., *Internet Access Services: Status as of December 31, 2017*, at 3 Fig. 2(a) (Aug. 2019) ("*2017 Internet Access Services Report*").

[23] *Id.* at 5 Fig. 3.

[24] Estimates derived by calculating the average annual rate of growth or decline at the speed tiers reported in the *2017 Internet Access Services Report* and applying those average annual rates or growth or decline to the next three years.



source for data through December 2017: *2017 Internet Access Services Report*

By 2030, or when the ten-year term for RDOF support expires, speeds of 25/3 Mbps will be far below average.

The fact that so many Americans are upgrading to 100/20 Mbps shows that they value higher speeds. The Commission's own Household Broadband Guide reflects that many households now require more than 25 Mbps download speed. According to the Household Broadband Guide, a household with three simultaneous broadband users needs more than 25 Mbps if two of those users are running high-bandwidth applications, such as streaming HD video, multiparty video conferencing, online gaming, or telecommuting. A household with four simultaneous users needs more than 25 Mbps if just one of the users is running a high-bandwidth application.[25] These are everyday scenarios—a telecommuting parent in a household with three

[25] FCC, Household Broadband Guide, https://www.fcc.gov/research-reports/guides/household-broadband-guide (last visited Sept. 15, 2019).

other users browsing or checking email, or two students using online video study tools while an adult listens to online radio and prepares dinner. As more and more households purchase Smart TVs and IoT devices, demand for bandwidth will continue to grow.[26]

The Commission should reduce the "above-baseline" weight by a minimum of 10 points to encourage bids at the above baseline tier of ≥ 100/20 Mbps rather than the baseline tier of ≥ 25/3 Mbps. By adjusting weights to encourage more bids at the above-baseline tier, the Commission can increase the likelihood that RDOF will bring 100/20 Mbps speeds to more of rural America, in line with the rest of the country, rather than locking them in to slower speeds for ten years. In the CAF Phase II reverse auction, nearly half of the locations won will receive 25/3 Mbps or less.[27] By adjusting the weights, the Commission can increase the likelihood that more locations will be won by a bidder ready to deploy 100/20 Mbps.

Reducing the above-baseline weight should have no effect on the number of locations for which a provider submits a bid in the Gigabit tier. Providing 1 Gbps/500 Mbps requires fiber to the premises. The process of determining whether and how much to bid to offer fiber to the premises is relatively straightforward—estimate the costs of deployment, and then determine the level of support that makes the deployment economic. By contrast, a provider that is considering providing service over copper loops (or over fixed wireless) can consider the costs either to provide 25/3 Mbps or to provide 100/20 Mbps. Both can be provided over last-mile infrastructure other than fiber. Both may require extending fiber further into the network to

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[26] Chuck Martin, *North American Consumers To Have 13 Connected Devices*, MediaPost (June 11, 2017) (predicting that by 2021, there will be 13 connected devices per person).

[27] *See Connect America Fund Phase II Auction (Auction 903) Closes; Winning Bidders Announced; FCC Form 683 Due October 15, 2018*, Public Notice, 33 FCC Rcd. 8257, 8257 (WCB & WTB 2018) (announcing that 53 percent of locations with a winning bid will receive 100 Mbps or higher).

shorten the distance between the customer premises and the DSLAM or fixed wireless tower. The cost differences and the support amounts that make a choice economic are more nuanced calculations. The Commission should encourage providers to lean towards 100/20 Mbps, rather than 25/3 Mbps, by lowering the weight assigned to the above-baseline tier by at least five points. Rural customers will get faster speeds while providers create necessary infrastructure to support 5G.[28]

Setting the conditions for the above-baseline tier is critical. If the incentives to bid at the above-baseline tier are too tenuous, providers will default to the 25/3 Mbps tier, assuming they are not prepared to bid at the gigabit tier. When the Commission established three X-factors in the 1995 Price Cap Performance Review Order, it recognized the importance of establishing those factors in ways that balanced the competing goals of rate reductions and moving towards a "pure" price-cap system, while recognizing the providers had diverse situations that made different options better for one than the other.[29] Similarly here, the Commission can acknowledge the differences among providers, their technologies, and their risk-tolerance, but tip the scales in favor of bids at 100/20 Mbps to increase the chances of bringing modern and more future-proof broadband speeds to more locations.

C. The Commission Should Not Require a Letter of Credit.

The Commission should stop requiring a letter of credit as a condition of bidding in the auction. Letters of credit are very expensive, as they must cover three-to-four times a provider's

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[28] *See supra* at 13.

[29] *Price Cap Performance Review for Local Exchange Carriers*, Report and Order, 10 FCC Rcd. 8961, 9054-55 ¶¶ 210-13 (1995).

annual support amounts at their most expensive point.[30] This expense has two negative effects. First, it affects a provider's ability to finance its deployment obligations. For example, the letter of credit could reduce the amount of credit otherwise available through a credit facility. The letter of credit makes the provider a less attractive borrower, because the lender knows that the provider has a substantial (albeit contingent) outstanding financial obligation. Second, the letter of credit is itself very expensive. A carrier may pay two-to-three percent in annual fees, and some likely pay far more. Perhaps most significantly, bidders are likely to account for these expenses in their bids. Put another way, letters of credit may be paid for by the Fund, reducing the funds available for actual deployment.

Windstream believes that the Fund should benefit rural Americans and, as an alternative, Windstream suggests the criteria described below in Section IV.D, which should effectively deter entities from bidding without near certainty that they can fulfill their obligations.

D. The Commission Should Adopt Additional Up-Front Requirements to Strengthen Bidders' Incentives to Follow Through on Their Winning Bids.

The Commission should do more to ensure that bidders are prepared to meet their obligations before they bid. In the CAF Phase II Reverse Auction, the Commission took many sensible steps, such as requiring more information from providers with no experience providing voice or broadband to demonstrate their ability to meet deployment obligations.[31] Notwithstanding these precautions, at least thirteen winning bidders (collectively winning

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[30] *See Notice* ¶¶ 84-86; *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd. 5949, 5990 ¶¶ 119-21, 6045, Appx. B. ("*Phase II Auction Order*").

[31] *Auction 903 Procedures PN*, 33 FCC Rcd. at 1445 ¶ 45 (requiring applications without two years of operational experience to submit three years of audited financial statements and a letter from a qualified bank stating that it would provide a letter of credit if the applicant became a winning bidder).

$3,774,572.80 to serve 3,552 locations) withdrew before submitting their long-form applications.[32] As a result, the areas for which they were the winning bidders may not receive broadband. These defaulters were all subject to a $3,000 base forfeiture for each census block group for which they won support but withdrew, limited to 5 percent of the bidder's total assigned support over the support term.[33] The risk of paying this modest penalty was apparently insufficient to prevent these providers from bidding. It is too early to know whether others may default because they fail to meet deployment milestones.

To deter bidding by providers that for whatever reason may not follow through with actual deployment, the Commission should add three eligibility requirements. First, the Commission should require that providers place an amount into escrow. The funds would be put into escrow before the provider places its first bid. Requiring providers to submit an upfront payment is a bidding prerequisite that the Commission has used in spectrum license auctions.[34] The provider would be permitted to take the funds out of escrow as soon as it certifies that it has met its first deployment milestone. Should the provider withdraw before any funding is disbursed or if it should fail to meet its first milestone one year after the deadline for meeting the first milestone, the provider will be referred to the Enforcement Bureau, which may issue a

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[32] *Connect America Fund Phase II Auction Support For 1,122 Winning Bids Ready to be Authorized*, Public Notice, DA 19-685, 1 (WCB rel. July 22, 2019); *Connect America Fund Phase II Auction Support For 611 Winning Bids Ready to be Authorized*, Public Notice, DA 19-535, 2-3 (WCB rel. June 7, 2019); *Connect America Fund Phase II Auction Support For 822 Winning Bids Ready to be Authorized; Bid Defaults Determined*, Public Notice, 34 FCC Rcd. 2076 at 2076-77 (2019).

[33] *See Phase II Auction Order*, 31 FCC Rcd. at 6000 ¶¶ 143-44.

[34] *See, e.g.*, *Incentive Auction of Upper Microwave Flexible Use Service Licenses in the Upper 37 GHz, 39 GHz, and 47 GHz Bands for Next-Generation Wireless Services; Comment Sought on Competitive Bidding Procedures for Auction 103*, Public Notice, 34 FCC Rcd. 2656, 2668 ¶ 51 (2019) (proposing upfront payment requirements "[i]n keeping with the Commission's usual practice in spectrum license auctions").

Notice of Apparent Liability that proposes a forfeiture up to the amount in escrow. This requirement would ensure that providers have "skin in the game" before they place their bids, not after.

In addition, providers should be limited in the total amount of support for which they can bid. It is risky for a small business to bid for many locations with limited existing infrastructure. Windstream suggests that the Commission cap the total amount that a provider can bid (for the entire ten-year term of support) to the amount of its annual revenues per its most recent audited financial statement.[35] This figure provides a generous amount of bidding flexibility to providers while keeping bids in line with what is reasonably achievable.

Finally, the Commission should require that providers be prepared to offer voice telephony throughout the winning area as soon as they assume their ETC obligations in the area; that is, as soon as they begin to receive high-cost support. This requirement will encourage bidders to think twice before placing any casual bids. To the extent that the winning bidder is not ready to provide voice telephony entirely over its own facilities, it should be feasible to arrange with an existing provider to resell voice service or lease facilities in order to provide voice until such time as the winning bidder is prepared to offering voice telephony entirely on its own facilities. Voice telephony remains the key service and a legal requirement of receiving high-cost support.[36] Bidders should be prepared to accept this responsibility on day one and not leave the responsibility to providers that will no longer receive support to fulfill it.

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[35] Annual revenues would be a cap that is simple to apply and proportionate to the financial size of the company submitting the bid.

[36] *See Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 17,663, 17,668 ¶ 5 (2011) (subsequent history omitted).

E. The Commission Should Not Reduce Funding When Bad Data Reflect More Locations in a Census Block Than Actually Exist.

We know the location counts are inaccurate; if the Commission goes forward with the auction before better data are available, providers should not be penalized when those data overcount unserved locations. Establishing that funding amounts will not change due to bad data will inspire confidence in bidders and encourage greater participation—increasing the likelihood that any particular census block will be bid on and that competing bids will drive down the support required to serve the block.

The number of locations to be served affects a provider's costs, to be sure. But some costs—such as the cost of core infrastructure and middle mile—are less dependent on the number of locations than other costs, such as individual loop deployment or conditioning. For example, the cost to deploy a new line of fiber to a remote terminal is roughly the same whether the terminal is expected to service five customers or 50. When providers plan their bids, they estimate these fairly stable costs in addition to the costs that vary more depending on how many locations must be served. For this reason, the Commission should not withhold (or require repayment of) funding if the true number of locations turns out to be less than what the Commission's data reflect.

F. Additional Flexibility in Deploying to All Locations in an Eligible Area Will Encourage More Bidding at Faster Speeds.

The Commission should increase the allowance for "missed" locations (where the pro rata amount of funds is returned to the Fund) from five percent to ten percent.[37] This is an appropriate metric that accounts for the unique deployment obstacles presented in rural areas.

[37] The current rules and the proposal in the *Notice* do not impose penalties for failure to reach a milestone unless the milestone is missed by more than five percent. 47 C.F.R. § 54.311(d).

Deployment in rural areas presents challenges that can be difficult to foresee. For example, Windstream has encountered a broad range of deployment obstacles from trees to hilly or mountainous terrain, railroads, waterway crossings, and right-of-way issues. Bidders will analyze their costs to deploy to a particular area before bidding on that area. But they must also factor in the "unknown"—unforeseen challenges that may make it prohibitively expensive to deploy to a few locations. The current five percent allowance gives bidders a small margin in their analysis to account for these challenges that they know exist, but not where or to what extent. Increasing that allowance to ten percent would give bidders greater latitude to bid, particularly in the most remote areas, and increase the likelihood that those areas will be subject to multiple bids.

V. IF THE COMMISSION PROCEEDS, IT SHOULD ESTABLISH FAIR TRANSITIONS THAT LEAVE NO CUSTOMER UNSERVED

Given the potential scope of the transition from CAF Phase II model-based support to RDOF support, the Commission needs to establish clear, fair, and equitable transition rules to govern how CAF Phase II model-based support is phased out as winning bidders of RDOF support begin their deployments.[38] It is important that the Commission protect consumers from the potential loss of voice or broadband service when the incumbent CAF Phase II provider is not also the winning bidder. The Commission should also look for ways to make transitions legally uncomplicated.

[38] *See NPRM* ¶ 104 (seeking comment on how to facilitate transition and "ensure that consumers retain access to voice and broadband services that are reasonably comparable to those offered in urban areas"); *Connect America Fund*, Report and Order, FCC No. 19-8, WC Docket No. 10-90, ¶ 11 (rel. Feb. 15, 2019) (implementing a transition that "protect[s] customers of current support recipients from a potential loss of service, and minimize[s] the disruption to recipients of frozen legacy support from a loss of funding").

A. The Commission Should Clarify that CAF Phase II Model Support Continues Through 2021.

The Commission should clarify that price cap carriers receiving CAF Phase II model-based support are entitled to a full, seventh year of funding in 2021. The optional seventh year of support was initially conceived to encourage price cap ILECs to participate in the CAF Phase II Model program when the performance standard for that program was increased from 4/1 Mbps to 10/1 Mbps, and as a transition in order to prepare them to no longer receive funding, consistent with the principle of "no flash cuts."[39] The Commission further specified that a model support recipient could use the seventh year of funding to meet its final deployment milestone.[40]

If the Commission determines that the seventh year of support is not available or otherwise reduces the seventh year of support, it would upset the settled expectations of price cap model support recipients when they elected to receive this support and produce an inequitable result. Where an ILEC bids and receives RDOF support greater than the amount of its model-based support, the model-based support amount should be transitioned to the RDOF support amount. Where an ILEC receives less support (either because it bids for RDOF support and wins less than its model-based support or because it chooses not to bid) than it was receiving, it should continue to receive the full annual model-based support amount through 2021.

B. The Commission Must Protect Consumers from Potential Loss of Voice or Broadband Service.

The Commission should continue funding for areas that currently receive CAF Phase II model-based support but for which there is no RDOF auction winner, or if an auction has not occurred by the end of the CAF Phase II model-based support term. The price cap carrier should

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[39] *See Connect America et al.*, Report and Order, 29 FCC Rcd. 15,644, 15,656 ¶ 32 (2014) (subsequent history omitted) ("*2014 CAF II Order*").

[40] *Id.* at 15,697 ¶ 148.

be afforded the option to continue to receive high-cost support to serve that area, understanding that it will also have obligations to continue to offer voice telephony and broadband at the speeds associated with its CAF Phase II model-based support. The support should continue at current levels until another recipient is awarded funding through a future auction or other funding mechanism, or until an unsubsidized competitor offers voice and broadband at 25/3 Mbps throughout the area. This approach ensures that the only provider able to provide voice telephony and qualifying broadband throughout the area can continue to do so until another provider emerges to serve the area. The approach also provides an amount of support that has already been found via the CAM to be adequate but not excessive.

Second, the Commission should clarify that an RDOF winning bidder's voice obligations begin immediately once it begins to receive its disbursements.[41] To the extent that the winning bidder does not yet have complete facilities to provide voice telephony in the area it has won, it can rely in part on resale of another provider's voice offering or lease of facilities to provide voice.[42] This obligation would serve several purposes. First, it would ensure that any entity that bids is prepared to provide service starting on day one, either over its own facilities or over a combination of its own facilities and another provider's. Second, it provides a clean transition of high-cost obligations. Once a new provider wins support to serve an area, the incumbent ETC no longer has a high-cost obligation to offer voice service.[43]

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41 *See also supra* at 20.

42 *See* 47 U.S.C. § 214(e)(1) (requiring that an ETC offer its USF supported services through "its own facilities or a combination of its own facilities and resale of another carrier's service").

43 This approach also aligns with the Commission's decision to forbear from enforcing a federal high-cost requirement that price cap carrier's offer support services in census blocks where another ETC has begun to receive support to deploy networks capable of providing voice and broadband. *See 2014 CAF II Order*, 29 FCC Rcd. at 15,663 ¶ 51.

C. The Commission Should Adopt Streamlined Transition Procedures for CAF Phase II Model-Support Providers That Will No Longer Be Funded in an Area.

The Commission can reduce the administrative burden on itself and on non-winning providers by streamlining two sets of requirements—the requirement for a provider to obtain authorization pursuant to Section 214 before discontinuing voice service, and the requirements associated with relinquishing ETC status and be relieved from carrier of last resort ("COLR") obligations.

The Commission already has in place streamlined procedures for discontinuance under Section 214. It should clarify here that streamlined procedures are available for any carrier to discontinue voice telephony, to the extent that another ETC now receives high-cost support through RDOF to provide voice telephony in the area. Once another provider must serve the area with voice telephony because it is an ETC for that area and also has a high-cost obligation to offer voice telephony throughout the area, the price cap carrier that no longer receives support for the area nor has a high-cost obligation to offer voice should receive streamlined treatment, just as a competitive local exchange carrier or interconnected VoIP provider would.[44]

In addition, the Commission should clarify the ability of a carrier to relinquish its status as an ETC. Being an ETC makes a carrier eligible to receive federal high-cost and Lifeline support and obligates the carrier to offer services supported by those programs throughout the

[44] To the extent that the provider seeks to discontinue a service for which it is classified as non-dominant, it should be entitled to streamlined treatment regardless whether the service is being discontinued as part of a technology transition. *See* 47 C.F.R. § 63.71(f)(1). Incumbent local exchange carriers' switched access services are non-dominant and should presumptively qualify for streamlined treatment. *Technology Transitions et al.*, Declaratory Ruling, Second Report and Order, and Order on Reconsideration, 31 FCC Rcd. 8283, 8290 ¶ 19 (2016).

service area for which it is designated an ETC.[45] Once a provider no longer receives high-cost support and another ETC has been designated for the area, there is no reason why the provider should continue to be required to be an ETC, either for high-cost or Lifeline purposes. ETC status triggers numerous burdensome reporting and other obligations that no longer have relevance once the ETC does not receive support. For example, in some states an ETC must continue to provide supported services listed in the federal rules at 47 C.F.R. § 54.101,[46] report its rates,[47] submit maps depicting its local exchange service areas.[48] These obligations are no longer necessary once another provider is designated as an ETC. Moreover, Section 214(e) was adopted in 1996 to address the obligations of carriers that *do* receive high-cost and Lifeline support, not those that do not. The Commission can expedite state relinquishment proceedings by clarifying that there is no reason for a carrier to remain designated as an ETC, or be subject to state COLR obligations, once another ETC has the obligation to provide supported services in the relevant area.

VI. CONCLUSION

The Commission will not obtain the best results for rural American unless it uses accurate data as the foundation for the RDOF auction. Rushing to auction using the data available today will result in wasted funds and leave more rural Americans stuck without adequate broadband or

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45 47 U.S.C. § 214(e) ("A common carrier designated as an eligible telecommunications carrier under paragraph (2), (3), or (6) shall be eligible to receive universal service support in accordance with section 254 of this title and shall, throughout the service area for which the designation is received . . . (A) offer the services that are supported by Federal universal service support mechanisms . . . .").

46 170 Ind. Admin. Code 7-1.2-9.

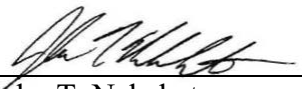
47 170 Ind. Admin. Code 7-1.2-4(1).

48 170 Ind. Admin. Code 7-1.2-4(2).

without any broadband at all. The Commission should conduct a single RDOF auction after accurate broadband data become available.

If the Commission nonetheless decides to proceed with a two-phased approach, it should adopt the changes that Windstream proposes to improve the outcome for rural Americans, including faster speeds and better infrastructure to support 5G.

Respectfully submitted,



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